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EXAMINER

CHEN, WENPENG

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2624

DATE MAILED: 08/25/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,633

Applicant(s)

SCHWARTZ ET AL.

Examiner

Wenpeng Chen

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,6,7,9 and 22-30 is/are allowed.
- 6) ☒ Claim(s) 2,5,8,10-21 and 38-41 is/are rejected.
- 7) ☒ Claim(s) 31-38 and 42-45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 14.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Examiner's remark

1. Based on rule 1.126, claim numbers of the second 23 and 24-44 in the amendment filed on 5/25/2004 are renumbered as 24-45, respectively. All the following discussions refer to the renumbered claims.

Examiner's responses to Applicant's remark

2. Applicants' arguments and amendments filed on 5/25/2004 have been fully considered.

The amendments overcome:

- the objection to drawings set forth in paper #13;
- the objection to specification set forth in paper #13;
- the objection to Claims 18-19 set forth in paper #13;
- the rejection under 35 U.S.C. 112, second paragraph to Claims 18-19 set forth in paper #13;
- the rejection under 35 U.S.C. 112, first paragraph to Claims 3, 6, and 9 set forth in paper #13.

3. Applicant's arguments with respect to claims 10-21 have been considered but are moot in view of the new ground(s) of rejection due to amendments, as explained in details below.

Drawings

4. The drawings are objected to because:

-- "JPEG 20W" in block 905 of Fig. 9 shall be changed to "JPEG 2000".

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The amendment is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter

Art Unit: 2624

into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: amendment to the third paragraph of page 67.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

6. Claims 31-38 and 42-45 are objected because of the following informalities:

-- In Claims 31, 35, and 42, "a starting pointer a respective layer" in line 3 shall be changed to "a starting pointer of a respective layer".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 2, 5, and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 2, 5, and 8 require (1) storing remaining layers of the each tile in a buffer, (2) outputting additional packets of said each tile from the remaining layers as a second complete

Art Unit: 2624

tile-part, and (3) wherein selection of packets of the plurality of packets for inclusion in the first complete tile-part is based on total bitrate for the first and second passes.

Checking the *original* specification, the Examiner cannot find support for the limitation of " wherein selection of packets of the plurality of packets for inclusion in the first complete tile-part is based on total bitrate for the first and second passes." The selection may be based on a total target bit rate, but not on the total bitrate for first and second passes, especially the bitrate of second pass or the combination of bitrate of the first and second passes.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 10-21 and 39-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Joshi et al. (US patent 6,668,090 cited previously.)

Joshi teaches an apparatus comprising:

-- means for compressing a bitstream to create an original compressed codestream; (Figs. 1-2 and 9)

Art Unit: 2624

-- means for performing rate control on the original compressed codestream to create a new compressed codestream in response to a request by selecting a number of layers to remain in the codestream, including a parser to use a packet structure containing a selection flag and to set a selection flag for each packet of the original codestream to a predetermined value to indicate whether said each packet is to be included in the new compressed codestream to control whether individual layers are included in the new compressed codestream; (Fig. 9; column 5, lines 42-55; column 11, lines 11-57 and 58-62; column 1, line 34 to column 2, line 3; column 2, lines 12-55; column 11, lines 23-57; The system generates a bitstream as taught by JPEG2000 image compression standard described in ISO/IEC JTC1/SC29 WG1 N1646. In N1646, the data is stored and processed (section 6 of JPEG2000 N1646.) Joshi uses JPEG2000 compression as shown in column 4, lines 1-68. A JPEG2000 uses packet structure. Fig. 9 describes a rate-control method by reducing bit-budget from a maximum value to a target value with selecting truncation points. The truncation points are selection flags to indicate what is included in the new compressed codestream. The passage in column 11, lines 58-62 teaches that a rate-control method can also be achieved by increasing bit-budget from a minimum value to a target value with selecting truncation points. It is the latter case that teaches Claim 15.)

-- wherein the packet structure is a member of an array of packet structures, each of the packet structures in the array corresponding to each of the layers of each tile in the original compressed codestream; (Sections B.10 and B.11 of JPEG2000 N1646 in pages 67-70 teach at least 4 kinds of packet structures that form an array (i.e. a set) and a packet structure is one of the array. Therefore, Joshi also teaches this limitation.)

Art Unit: 2624

-- means for computing a total number of bytes for the new compressed codestream based on a desired rate; (block 912 of Fig. 9; column 11, lines 58-62)

-- means for adding the total number of bytes associated with at least one layer, starting with the highest level layer and adding a new layer until the total number of bytes associated with the one or more layers whose bytes have been added is equal to or greater than the number of bytes desired or bytes for all layers have been added; (block 914 of Fig. 9; column 11, lines 58-62)

-- means for subtracting bytes associated with a last added layer when the total number of bytes associated with the one or more layers whose bytes have been added is greater than the number of bytes desired; (block 914 of Fig. 9; column 11, lines 58-62; The last added layer that makes the total number of bytes larger than the target bytes is discarded (subtracted.))

-- means for setting selection flags of packets associated with layers whose bytes are included in the total number of bytes; (block 915 of Fig. 9; column 11, lines 58-62; The truncation point are updated.)

-- mean for writing the new codestream based on whether selection flags of packets for the original compressed codestream are set; (column 1, line 34 to column 2, line 3; column 2, lines 12-55; column 11, lines 23-57; The system generates a bitstream as taught by JPEG2000 image compression standard described in ISO/IEC JTC1/SC29 WG1 N1646. In N1646, the data can be stored (section 6 of JPEG2000 N1646.) In column 11, Joshi teaches generating truncated bitstream 911 that is generated based on the selection flags. As taught in section 6 of JPEG2000 N1646, the resultant bitstream is stored. Therefore, the truncated bitstream is written into a memory.)

-- means for reading packets in sequential order from the compressed codestream based on order information indicated in a marker; (column 11, lines 11-67; The marker is that shown in the visual quality table.)

-- wherein the order information comprises progression order information and the marker comprises a COD marker. (column 11, lines 11-67; Section A. 61 of JPEG2000 N1646 teaches that the JPEG2000 bit stream comprises a COD marker.)

The above-cited passages also teach the corresponding methods of Claims 10-14.

Joshi further teaches an article of manufacture comprising at least one recordable media storing executable instructions that can be executed by the computer shown in column 4, lines 33-67 to carry out the method. Therefore, Joshi also teaches Claims 20-21 and 39-41.

Allowable Subject Matter

11. Claims 1, 3-4, 6-7, 9, and 22-30 are allowed. Claims 2, 5, and 8 are not rejectable over the prior art.

The following is a statement of reasons for the indication of allowable subject matter. The prior art fails to teach the method of Claim 1, the article of Claim 7, and the apparatus of Claim 5 which specifically comprise the following feature in combination with other limitations associated the claims:

-- coding of each tile of an input codestream as recited;
-- outputting, as a part of a first pass, a plurality of packets of said each tile to an output codestream as a first complete tile-part as recited;

Art Unit: 2624

-- storing remaining layers of said each tile in a buffer as recited;

-- *outputting, as a part of a second pass, additional packets of said each tile from the remaining layers as a second complete tile-part if remaining unused bandwidth of the output codestream is available based on a desired bandwidth of the output codestream.*

12. Claims 31-38 and 42-45 are objected to as being dependent upon a rejected base claim, but would be allowable if (1) rewritten in independent form including all of the limitations of the base claim and any intervening claims and (2) rewritten to overcome the objection set forth above.

The following is a statement of reasons for the indication of allowable subject matter. The prior art fails to teach the method of Claim 31, the article of Claim 42, and the apparatus of Claim 35 which specifically comprise the following feature in combination with other limitations associated the claims:

-- *performing rate control with a parser using a packet structure* as recited;

-- *the packet structure is a member of an array of packet structures*, wherein the packet structure comprises;

- a first portion to store a starting pointer of a respective layer of a tile;

- a second portion to store a size of the respective layer of a tile.

Conclusion

Art Unit: 2624

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications. TC 2600's customer service number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Application/Control Number: 09/800,633

Page 11

Art Unit: 2624

Wenpeng Chen
Examiner
Art Unit 2624

August 20, 2004

A handwritten signature in cursive script, appearing to read 'Wenpeng Chen', written in black ink.